

ABSTRACT

A magnetizing device for superconductor and a superconducting synchronous machine are provided capable of constituting more compact and simple equipment that uses a superconductor as a magnet. The magnetizing device for superconductor includes a superconductor (131); a coolant chamber (142) for cooling the superconductor (131) down to or below a critical temperature at which the transition to a superconducting state occurs; coils (111, 111') for generating a magnetic field equal to or higher than a critical magnetic field in which the intrusion of a magnetic flux into the superconductor (131) starts, around the superconductor (131) cooled down to or below the critical temperature at which the transition to the superconducting state occurs; and position modification means capable of arranging the superconductor (131) on a disk (120) and modifying the relative positional relationship with the coils (111, 111').